

SINGLEMODE FIBER OPTIC CABLE, SINGLE SHEATHED



ROHS compliant



Optic Fiber



UV
resistant



Rodent resistant



Water blocked

STANDARDS

Own design
IEC 60794

DESCRIPTION AND APPLICATION

Cable from 6 to 72 singlemode optical fibres, with fibreglass yarns reinforcement and an outer polyethylene sheath, giving it special mechanical strength and retardant protection against rodents.

The recommended use for this cable is in underground installations in duct.

CONSTRUCTION

- Singlemode optical fibres according to ITU-T G.652D
- PBT loose tubes filled with thixotropic compound. Colour coding according to tables 1 and 2.
- Dielectric fibreglass central reinforced element.
- Fibreglass yarns as reinforcement element
- Black polyethylene outer jacket. (1.35 mm.)
- **Sheath marking** : The cable sheath will be marked at regular intervals with the following information:
 - *Manufacturer / year / Number of fibres / Length markers*
 - *Other sheath marks available upon request*



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OPTICAL FIBER CHARACTERISTICS

The parameters of the optical fibres are compliant with the ITU-T G.652D recommendation.

Physical characteristics:

Cladding diameter: $125 \pm 1 \mu\text{m}$

Cladding non circularity $\leq 2\%$

Coating diameter (coloured):: $250 \pm 15 \mu\text{m}$

Coating non circularity $\leq 6\%$

Optical characteristics:

Attenuation coefficient:

Average at 1310 nm $\leq 0,36 \text{ dB/km}$

Individual maximum at 1310 nm $\leq 0,37 \text{ dB/km}$

Average at 1550 nm $\leq 0,22 \text{ dB/km}$

Individual maximum at 1550 nm $\leq 0,24 \text{ dB/km}$

$\text{PMD} \leq 0,20 \text{ ps/km}^{1/2}$

TABLE 1: LOOSE TUBES COLOUR CODE

Number of fibres	
Tube number	12 (5T)
1	Red
2	Blue
3	Black ^F
4	Black ^F
5	Black ^F
6	
Fibres in each tube	6
Tube Diameter (mm)	2.0
FRP Diameter (mm)	1.5

^F. Filler element

TABLE 2: OPTICAL FIBERS COLOUR CODE

Fibre number	Colour
1	Red
2	Blue
3	Green
4	Yellow
5	Violet
6	White

	Note: All drawings, designs, specifications and particulars of weights, dimensions, etc. in this documentation are only indicative and may not be considered contractual. Cables de Comunicaciones Zaragoza SL Polígono de Malpica, c/D nº 83 • Tel +34 976729900 • Fax +34 976729974 • comercial@cablescom.com	
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MECHANICAL CHARACTERISTICS

Tensile strength ($\Delta\epsilon_f \leq 0,5\%$)	EN 187000 Met. 501	2.500 N
Crush resistance (short term)	EN 187000 Met. 504	2000 N / 100mm
Impact resistance	EN 187000 Met. 505	5 J
Bending radius	EN 187000 Met. 513	$r = 15 \times \text{cable diameter}$
Water penetration	EN 187000 Met. 605B	$L_{\text{Pwater}} \leq 3\text{m (1 hour)}$
Operating temperature	EN 187000 Met. 601	-20°C / 60°C

SIZE AND WEIGHT

Number of fibres	Nominal diameter (mm)	Nominal weight (kg/km)
24 (5T)	9.2	61